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EXAMINER				
SANDERS, AARON J				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/806,789

Applicant(s)

WANG ET AL.

Examiner

AARON SANDERS

Art Unit

2168

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 37-41 and 72-82 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 37-41 and 72-82 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 December 2007 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB08)
- Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

Applicant's amendment filed 17 December 2007 has been entered. Claims 37-41 and 72-82 are pending. Claims 37, 72, and 78 are amended. This action has been made FINAL, as necessitated by amendment.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the steps of claims 37, 72, and 78 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Figs. 5 and 8-9 are objected to because they are not in English. See 37 C.F.R. 1.52(b)(1)(ii).

Figs. 8 and 9 are objected to because of improper shading. All drawings must be made by a process which will give them satisfactory reproduction characteristics. See 37 C.F.R. 1.84(l) and (m).

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the

drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

As per claims 38-41, the claims should begin "The method as recited in claim 37 (39)".

As per claim 78, there should be an "and" after the second to last limitation, the use of semicolons should be consistent, and the two uses of "keyword" should be "keywords."

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 37, 72, and 78 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention.

As per claim 37, the limitations “iteratively training a search engine using data in the log database, wherein the search engine comprises a query parser and a FAQ matcher,” “deriving weighting factors based on the iterative training, wherein the weighting factors are used to determine the relevance,” and “identifying a confidence rating which measures a degree of the relevance between the previously stored frequently asked questions and the query” do not appear in the specification.

As per claim 72, the limitation “determining a relevance of the parse tree and the at least one keyword to a list of frequently asked questions (FAQ), wherein the relevance is determined by a FAQ matcher that has been iteratively trained using data from a log database” does not appear in the specification.

As per claim 78, the limitation “a log analyzer able to derive, over time, various weights indicating how relevant the parse tree and the one or more keyword are to a list of frequently asked questions, wherein the various weights are determined based on iterative training using data from a log database” does not appear in the specification.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 78-82 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

As per claims 78-82, the instant claims are directed to software *per se*. Independent claim 78 recites a computer program *per se* and functional descriptive material consisting of data

structures and computer programs, which impart functionality when employed as a computer component. As such, the instant claims are not limited to statutory subject matter and are therefore non-statutory. See *Diehr*, 450 U.S. at 185-86, 209 USPQ at 8.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 37-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Warthen, U.S. 6,584,464 (Warthen), in view of Bowman et al., U.S. 6,006,225 (Bowman), and in view of Lin et al., U.S. 6,675,159 (Lin).

37. Warthen teaches “*A method comprising: receiving a query*,” see col. 1, lines 54-67, “The query input processor is used for accepting an initial user query.”

Warthen teaches “*mapping the query from a query space to a question space to identify associated frequently asked questions*,” see col. 2, lines 1-11, “a semantic network to obtain a weighted list of well-formed questions representative of possible semantic meanings for the initial user query.”

Warthen teaches “*mapping the associated frequently asked questions from the question space to a template space to identify associated templates*,” see col. 3, lines 41-51, “QPE 30 is coupled to dictionary 34 and semantic net snapshot 40 and uses the information obtained from those sources to generate template questions in response to a user-entered question” where QPE

means “Query Processing Engine” and the referenced “semantic net” is the claimed “question space.”

Warthen teaches “*mapping the templates from the template space to an answer space to identify associated answers*,” see col. 3, lines 41-51, “Template questions are questions that are mapped to answers in question-answer mapping table 42.”

Warthen teaches “*and returning the answers in response to the query*,” see col. 4, lines 19-24, “information server 50 uses AE [*sic*] to generate answers to the questions and either presents the user with one or more URL’s of sites that answer the initial question” where “AE” should be “APE” and means “Answer Processing Engine”, see Fig. 1.

Warthen teaches logging previous queries, see col. 4, lines 31-42, “The query is logged to log files 20 for use in further refining information server 50.” Warthen does not explicitly teach “*the mapping comprises: analyzing a log database to determine a relevance of previously stored frequently asked questions to the query*.” Bowman does, however, see col. 4, lines 23-43, “the query term correlation date is regenerated periodically from recent query submissions, such as by using the last M days of entries in a query log, and thus heavily reflects the current tastes of users.” Thus, it would have been obvious to one of ordinary skill in the database art at the time of the invention to combine the teachings of the cited references because Bowman’s teachings would have allowed Warthen’s method to gain greater query refinement, see col. 4, lines 23-43.

Warthen does not explicitly teach “*deriving weighting factors based on the iterative training, wherein the weighting factors are used to determine the relevance*.” Bowman does, however, see col. 7, line 60 – col. 8, line 14, “the query term correlation data is preferably generated from the query log 135 using the table generation process... A hybrid approach can

alternatively be used in which the table is generated from a large number of log files, but in which the most recent log files are given greater weight.” Thus, it would have been obvious to one of ordinary skill in the database art at the time of the invention to combine the teachings of the cited references because Bowman’s teachings would have allowed Warthen’s method to gain greater query refinement, see col. 4, lines 23-43.

Warthen does not teach “*and ascertaining from the previously stored frequently asked questions the associated frequently asked questions based on the determined relevance.*”

Bowman does, however, see col. 4, lines 23-43, “As a result, the related terms suggested by the search engine tend to be terms that correspond to the most frequently searched items during the relevant time period.” Thus, it would have been obvious to one of ordinary skill in the database art at the time of the invention to combine the teachings of the cited references because Bowman’s teachings would have allowed Warthen’s method to gain greater query refinement, see col. 4, lines 23-43.

Warthen and Bowman do not teach “*the analyzing comprises: iteratively training a search engine using data in the log database.*” Lin does, however, see Figs. 7-8 and col. 19, line 60 - col. 20, line 9, “the object is to train the Bayes classifier 130 to learn membership criteria for a specific topic... In this mode, topic editors provide training data in the form of specific documents known to belong to the selected topic or domain,” where the process is iterative as shown by the arrows in Fig. 7 and the code loops in Fig. 8. Thus, it would have been obvious to one of ordinary skill in the database art at the time of the invention to combine the teachings of the cited references because Lin’s teachings would have allowed Warthen and Bowman’s method to gain a method of accurately training the search system, see col. 19, line 60 - col. 20,

line 9. Warthen does teach “*wherein the search engine comprises a query parser and a FAQ matcher,*” see Fig. 5 and col. 5, lines 26-35, “Referring now to FIG. 5, a block diagram of QPE 30 and APE 32 is shown with QPE 30 comprising... a parser 155,” where the claimed “query parser” is the referenced Parser 155 and the claimed “FAQ matcher” is the referenced APE 32.

Warthen and Bowman do not teach “*identifying a confidence rating which measures a degree of the relevance between the previously stored frequently asked questions and the query.*” Lin does, however, see col. 12, lines 30-42, “The basic premise of relevancy searching is that results are sorted, or ranked according to certain criteria. The system provides a comparison and ranking algorithm, described below, to determine the similarity between a query from a user and a document, and rank each document based upon a set of criteria,” where the claimed “confidence rating” is the referenced “ranking.” Thus, it would have been obvious to one of ordinary skill in the database art at the time of the invention to combine the teachings of the cited references because Lin’s teachings would have allowed Warthen and Bowman’s method to gain more relevant results, see col. 12, lines 30-42.

38. Warthen teaches “*A method as recited in claim 37, wherein the mapping from the query space to the question space comprises: parsing the query to identify at least one associated concept,*” see col. 5, lines 26-35, “Another approach to tokenizing is to scan the initial user query and group words into conceptual strings.”

Warthen teaches “*and correlating the concept to one or more frequently asked questions,*” see col. 5, lines 26-35, “Tokenizer 150 converts the initial user query into a list of words and provides the list to parser 155” where, see Abstract, “the question processor includes a tokenizer for tokenizing the initial user query into a list of words” and, see Abstract, “The

question processor processes the initial user query to identify a set of possible well-formed questions selected from the question database, where a well-formed question is a question in the database that is coupled to at least one answer reference” which correlates the concepts to frequently asked questions.

39. Warthen teaches “*A method as recited in claim 37, wherein the mapping from the question space to the template space comprises cross-indexing from a first table containing question identifications to a second table containing template identifications,*” see col. 3, lines 41-51, “a knowledge base 36, which comprises storage for a semantic net snapshot 40 and a question-answer mapping table 42. QPE 30 is coupled to dictionary 34 and semantic net snapshot 40 and uses the information obtained from those sources to generate template questions in response to a user-entered question.”

40. Warthen teaches “*A method as recited in claim 39, wherein the mapping from the template space to the answer space comprises cross-indexing from the second table to a third table containing answer identifications,*” see col. 3, lines 41-51, “Template questions are questions that are mapped to answers in question-answer mapping table 42.”

41. Warthen teaches “*A method as recited in claim 37, further comprising: presenting the answers to a user for confirmation as to which of the answers represent the user’s intentions in the query,*” see Fig. 3.

Warthen teaches “*analyzing the query and the answers confirmed by the user,*” see col. 5, lines 8-14, “FIG. 3 shows an example display 90 resulting from such a questions display page. From that display 90, the user can select the desired template question and parameters, or can select a button 92 for more answers, resulting in a display such as that shown in FIG. 4.”

Warthen teaches “*and modifying the answers that are returned in response to the query based on information gleaned from the analyzing,*” see Figs. 3 and 4.

Claims 72-82 are rejected under 35 U.S.C. 103(a) as being unpatentable over Warthen, U.S. 6,584,464 (Warthen), in view of Fung et al., U.S. 6,687,689 (Fung), and in view of Lin et al., U.S. 6,675,159.

72. Warthen teaches “*A method of parsing a search query,*” see Fig. 5 and col. 5, lines 36-44, “Parser 155 identifies the set of possible syntactic structures that could represent the question(s) being asked.”

Warthen teaches “*producing a parse tree from at least one parsable character string of the search query,*” see Fig. 8 and col. 6, lines 9-14, “Once keywords are mapped to questions, the questions are mapped to answers using question-answer mappings 202. A small portion 204 of semantic net 200 is shown in detail in FIG. 8,” where the claimed “parse tree” is the referenced “semantic map.”

Warthen teaches “*generating at least one keyword based at least on one non-parsable character string of the search query,*” see col. 5, lines 45-56, “For example, a user query might use one of the synonyms ‘drizzle’, ‘storming’ or ‘misting’ for raining. By reducing the synonyms to canonical form, the information server does not need to deal with so many questions because, in the above example, four questions collapse into one.”

Warthen teaches “*and using the parse tree and the keyword to return answers to the search query,*” see Fig. 9, “Internet (end user)” and Figs. 3 and 4.

Warthen does not teach “*comprising: segmenting the search query into individual character strings, wherein at least one of the individual character strings comprises a single character.*” Fung does, however, see Fig. 4 and col. 8, lines 13-28, “Preferably, the query includes Chinese characters or syllables that were entered by a user at a first geographic location. Next, in a step 415, the document finder 301 determines words within the query.” Thus, it would have been obvious to one of ordinary skill in the database art at the time of the invention to combine the teachings of the cited references because Fung’s teachings would have allowed Warthen’s method to gain greater versatility in searching the Internet, see col. 2, lines 3-14.

Warthen and Fung do not teach “*determining a relevance of the parse tree and the at least one keyword to a list of frequently asked questions (FAQ).*” Lin does, however, see col. 12, lines 30-42, “The basic premise of relevancy searching is that results are sorted, or ranked according to certain criteria. The system provides a comparison and ranking algorithm, described below, to determine the similarity between a query from a user and a document, and rank each document based upon a set of criteria,” where the claimed “confidence rating” is the referenced “ranking.” Thus, it would have been obvious to one of ordinary skill in the database art at the time of the invention to combine the teachings of the cited references because Lin’s teachings would have allowed Warthen and Fung’s method to gain more relevant results, see col. 12, lines 30-42.

Warthen and Fung do not teach “*wherein the relevance is determined by a FAQ matcher that has been iteratively trained using data from a log database.*” Lin does, however, see Figs. 7-8 and col. 19, line 60 - col. 20, line 9, “the object is to train the Bayes classifier 130 to learn membership criteria for a specific topic... In this mode, topic editors provide training data in the

form of specific documents known to belong to the selected topic or domain,” where the process is iterative as shown by the arrows in Fig. 7 and the code loops in Fig. 8. Thus, it would have been obvious to one of ordinary skill in the database art at the time of the invention to combine the teachings of the cited references because Lin’s teachings would have allowed Warthen and Fung’s method to gain a method of accurately training the search system, see col. 19, line 60 - col. 20, line 9.

73. Warthen teaches “*The method of claim 72, further comprising: conducting keyword searching using the at least one keyword,*” see col. 1, lines 8-19, “initiate a search with a particular set of keywords.”

74. Warthen teaches “*The method of claim 72, wherein the parse tree represents a collection of concepts related to the search query,*” see Fig. 6, where the referenced “automobile” semantic map qualifies as the claimed “tree” and is a collection of concepts related to a search query.

75. Warthen teaches “*The method of claim 74, further comprising matching the parsed concepts to a list of frequently asked questions,*” see col. 6, lines 1-8, “Since the list is of instantiated questions that are based on template questions, they will be found in question-answer mapping table 42” where “Template questions are questions that are mapped to answers in question-answer mapping table 42” and as such qualify as “frequently asked questions.”

76. Warthen teaches “*The method of claim 75, further comprising: identifying at least one answer associated with the list of frequently asked questions that match the parsed concepts and keywords,*” see col. 1, lines 54-67, “The question processor processes the initial user query to identify a set of possible well-formed questions selected from the question database, where a

well-formed question is a question in the database that is coupled to at least one answer reference.”

Warthen teaches “*and presenting the at least one answer to a user in a user interface that permits a user to select a desired answer from the one or more answers,*” see col. 4, lines 19-24, “Once the user selects a template question, information server 50 uses AE to generate answers to the questions and either presents the user with one or more URL’s of sites that answer the initial question (step 9A) and control passes to an answer display page (step 9B) that presents the user with the answer directly (step 10).”

77. Warthen teaches “*The method of claim 76, further comprising: logging the search query and at least one answer selected by the user in a log database,*” see col. 3, lines 27-40, “As shown in FIG. 1(a), actions taken by users in response to prompts on the basic set of pages are logged in log files 20” where there is a “log user question” and a “log user pick.”

Warthen teaches “*and analyzing the log database to derive at least one weighting factor indicating how relevant the frequently asked questions are to the parsed concepts and keywords,*” see col. 4, lines 31-42, “The query is logged to log files 20 for use in further refining information server 50” and Claim 9, “removing template questions from the set that have a confidence weight below a predetermined threshold.”

78. Warthen teaches “*A parser for a search engine,*” see Fig. 5 and col. 5, lines 36-44, “Parser 155 identifies the set of possible syntactic structures that could represent the question(s) being asked.”

Warthen teaches “*a natural language parser module that produces a parse tree from one or more parsable character strings of the search query,*” see Fig. 8 and col. 6, lines 9-14, “Once

keywords are mapped to questions, the questions are mapped to answers using question-answer mappings 202. A small portion 204 of semantic net 200 is shown in detail in FIG. 8,” where the claimed “parse tree” is the referenced “semantic map.”

Warthen teaches “*a keyword parser to identify one or more keywords in the search query and to output the keywords*,” see col. 4, lines 31-42, “The initial user query can be a natural language question (e.g., ‘Where can I find information on the sport bicycling?’) and may well include grammatical errors, or a set of keywords, such as ‘info sport bicycling’ ... When the user presses button 84, the initial user query is sent to information server 50 and client interface 60 passes the query to QPE 30,” where keywords have clearly been identified and “output” to QPE.

Warthen teaches “*a log analyzer able to derive, over time, various weights indicating how relevant the parse tree and the one or more keyword are to a list of frequently asked questions*,” see Abstract, “a matcher for matching the canonical syntactic structure against a semantic network to obtain a weighted list of well-formed questions representative of possible semantic meanings for the initial user query.”

Warthen teaches “*wherein the parse tree and the one or more keywords are used to return answers to the search query*,” see Fig. 9, “Internet (end user)” and Figs. 3 and 4.

Warthen does not teach “*comprising: a segmentation module that segments a search query into one or more individual character strings, wherein at least one of the one or more individual character strings comprises a single character*.” Fung does, however, see Fig. 4 and col. 8, lines 13-28, “Preferably, the query includes Chinese characters or syllables that were entered by a user at a first geographic location. Next, in a step 415, the document finder 301 determines words within the query”. Thus, it would have been obvious to one of ordinary skill

in the database art at the time of the invention to combine the teachings of the cited references because Fung's teachings would have allowed Warthen's method to gain greater versatility in searching the Internet, see col. 2, lines 3-14.

Warthen and Fung do not teach "*wherein the various weights are determined based on iterative training using data from a log database.*" Lin does, however, see Figs. 7-8 and col. 19, line 60 - col. 20, line 9, "the object is to train the Bayes classifier 130 to learn membership criteria for a specific topic... In this mode, topic editors provide training data in the form of specific documents known to belong to the selected topic or domain," where the process is iterative as shown by the arrows in Fig. 7 and the code loops in Fig. 8. Thus, it would have been obvious to one of ordinary skill in the database art at the time of the invention to combine the teachings of the cited references because Lin's teachings would have allowed Warthen and Fung's method to gain a method of accurately training the search system, see col. 19, line 60 - col. 20, line 9.

79. Warthen teaches "*The parser of claim 78, wherein the parse tree represents a collection of concepts related to the search query,*" see Fig. 6, where the referenced "automobile" semantic map qualifies as the claimed "tree" and is a collection of concepts related to a search query.

80. Warthen teaches "*The parser of claim 78, further comprising a search module that matches the parsed concepts to a list of frequently asked questions,*" see col. 6, lines 1-8, "Since the list is of instantiated questions that are based on template questions, they will be found in question-answer mapping table 42" where "Template questions are questions that are mapped to

answers in question-answer mapping table 42” and as such qualify as “frequently asked questions.”

81. Warthen teaches “*The parser of claim 80, wherein the search module: identifies at least one answer associated with the list of frequently asked questions that match the parsed concepts and keywords,*” see col. 1, lines 54-67, “The question processor processes the initial user query to identify a set of possible well-formed questions selected from the question database, where a well-formed question is a question in the database that is coupled to at least one answer reference.”

Warthen teaches “*and presents the at least one answer to a user in a user interface that permits a user to select a desired answer from the one or more answers,*” see col. 4, lines 19-24, “Once the user selects a template question, information server 50 uses AE to generate answers to the questions and either presents the user with one or more URL’s of sites that answer the initial question (step 9A) and control passes to an answer display page (step 9B) that presents the user with the answer directly (step 10).”

82. Warthen teaches “*The parser of claim 81, wherein the search module: logs the search query and at least one answer selected by the user in a log database,*” see col. 3, lines 27-40, “As shown in FIG. 1(a), actions taken by users in response to prompts on the basic set of pages are logged in log files 20” where there is a “log user question” and a “log user pick.”

Warthen teaches “*and analyzes the log database to derive at least one weighting factor indicating how relevant the frequently asked questions are to the parsed concepts and keywords,*” see col. 4, lines 31-42, “The query is logged to log files 20 for use in further refining

information server 50” and Claim 9, “removing template questions from the set that have a confidence weight below a predetermined threshold.”

Response to Arguments

As per Applicant’s argument that the amendment to Figs. 8-9 overcomes the objection for improper shading, the Examiner respectfully disagrees. The drawings are still grayscale, which does not comply with 37 C.F.R. 1.84(m): “Shading is used to indicate the surface or shape of spherical, cylindrical, and conical elements of an object. Flat parts may also be lightly shaded... Spaced lines for shading are preferred. These lines must be thin, as few in number as practicable, and they must contrast with the rest of the drawings... Solid black shading areas are not permitted, except when used to represent bar graphs or color.”

As per Applicant’s argument that Figs. 5 and 8-9 do not need to be in English, the Examiner respectfully disagrees. Specifically, 37 C.F.R. 1.52(b)(1)(ii) states that “[t]he application... including the... drawings... [must b]e in the English language or be accompanied by a translation... together with a statement that the translation is accurate.”

As per Applicant’s argument that the phrase “A method as recited in claim 37 (39)” is proper dependent form, the Examiner respectfully disagrees. As per Applicant’s first argument, the Examiner cannot comment on previously issued patents. As per Applicant’s second argument, a secondary reference is not binding or persuasive. As per Applicant’s third argument, MPEP 608.01(n) does not apply in the instant situation because it deals with multiple dependent claims. 37 C.F.R. 1.75(c) applies, and is binding on the Examiner. It states, “One or more claims may be presented in dependent form, referring back to and further limiting another

claim or claims in the same application... Claims in dependent form shall be construed to include all the limitations of the claim incorporated by reference into the dependent claim” (emphasis added). Dependent claims may be separately patentable, as Applicant argues, but they still “further limit” the independent claim on which they depend, and must be phrased as such. If Applicant wishes the dependent claims to be separately examined as independent claims, they must be amended to include all the limitations of the independent claims upon which they depend and put in independent format. The Examiner notes that dependent claims 73-77 and 79-82 use the proper phrasing.

Applicant’s arguments with respect to claims 37, 72, and 78 not addressed below have been considered but are moot in view of the new ground(s) of rejection.

As per Applicant’s argument that Warthen and Bowman do not teach *“deriving weighting factors based on the iterative training, wherein the weighting factors are used to determine the relevance,”* the Examiner respectfully disagrees. Specifically, the Examiner cited Bowman, col. 7, line 60 – col. 8, line 14, “the query term correlation data is preferably generated from the query log 135 using the table generation process... A hybrid approach can alternatively be used in which the table is generated from a large number of log files, but in which the most recent log files are given greater weight.” Thus, it would have been obvious to one of ordinary skill in the database art at the time of the invention to combine the teachings of the cited references because Bowman’s teachings would have allowed Warthen’s method to gain greater query refinement, see col. 4, lines 23-43.

As per Applicant’s argument that Warthen does not teach *“a log analyzer able to derive, over time, various weights indicating how relevant the parse tree and the one or more keyword*

are to a list of frequently asked questions,” the Examiner respectfully disagrees. Specifically, the Examiner cited the Abstract, “a matcher for matching the canonical syntactic structure against a semantic network to obtain a weighted list of well-formed questions representative of possible semantic meanings for the initial user query.”

The Examiner notes that various features of the amended limitations are new matter, especially the iterative training.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron Sanders whose telephone number is 571-270-1016. The examiner can normally be reached on M-Th 8:00a-5:00p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Vo can be reached on 571-272-3642. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tim T. Vo/
Supervisory Patent Examiner, Art Unit
2168

/AJS/
Aaron J. Sanders
Examiner
11 March 2008

/S. P./
Primary Examiner, Art Unit 2164